

In the Claims

Canceled claims 14, 73 and 75.

1. (thrice amended) A method for producing [thin,] foamed glass matrices (FGMs), comprising the steps of:

(a) preparing an initial mixture comprising at least one glass matrix-forming material containing a biologically active agent consisting essentially of a therapeutic agent, prophylactic agent or a pharmaceutically effective substance selected from the group comprising diagnostic reagents, antibodies and antigens, and a solvent therefor;

(b) evaporating a proportion of the solvent from the mixture to obtain a syrup;
[and]

(c) [exposing the syrup to reduced] boiling the syrup under less than atmospheric pressure [at a temperature that causes] to produce foaming of the syrup [at said pressure, resulting in formation of an FGM.] ; and

(d) continuing step (c) until the boiling results in the formation of a solid foam and produces a foamed glass matrix.

19. (twice amended) The method according to claim 1, wherein the evaporation during step (b) occurs at [reduced external] less than atmospheric pressure.

26. (thrice amended) The method according to claim 1, wherein the pressure during step (c) is below [about] 30 mm Hg.

30. (thrice amended) The method according to claim 1, wherein the foaming during step (c) occurs at an [external] temperature above 25°C.

40. (twice amended) The method according to claim 36, wherein the additive is at least one salt that decomposes under [reduced] less than atmospheric pressure to give a gaseous product.

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57. (thrice amended) The method according to claim [50] 49, wherein the biologically active agent to be preserved is a vaccine.

62 (thrice amended) A method for preserving a biologically active agent within a [thin,] foamed glass matrix (FGM) comprising the steps of:

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(a) preparing an initial mixture comprising at least one glass matrix-forming material containing a biologically active agent to be preserved and a solvent therefor [and the biologically active agent to be preserved];

(b) evaporating a proportion of the solvent from the mixture to obtain a syrup; [and]

(c) [exposing the syrup to reduced] boiling the syrup under less than atmospheric pressure [at a temperature that causes] to produce foaming of the syrup [at said pressure, resulting in formation of an FGM.] ; and

(d) continuing step (c) until the boiling results in the formation of a solid foam and produces a foamed glass matrix.

64. (thrice amended) The method according to claim 62, wherein the mixture prepared in step a) comprises different solvents selected from the group comprising aqueous, organic or a mixture of both, for the glass matrix-forming material and the biologically active agent.

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65 (thrice amended) A method for producing a single dose of a biologically active agent, comprising the steps of:

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(a) preparing an initial mixture comprising at least one glass matrix-forming material containing a biologically active agent and a solvent therefor [and the biologically active agent];

(b) evaporating a proportion of the solvent from the mixture to obtain a syrup;

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(c) [exposing the syrup to reduced] boiling the syrup under less than atmospheric pressure [at a temperature that causes] to produce foaming of the syrup [at said pressure, resulting in formation of an FGM.] ; and

[(d) optionally reducing residual moisture.]

(d) continuing step (c) until the boiling results in the formation of a solid foam and produces a foamed glass matrix.

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67. (thrice amended) The method according to claim 65, wherein the mixture prepared in step a) comprises different solvents selected from the group comprising aqueous, organic or a mixture of both, for the glass matrix-forming material and the biologically active agent.

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70. (thrice amended) A method for reconstituting a biologically active agent that is incorporated into [thin,] foam glass matrices (FGMs), comprising contacting the FGMs with sufficient solvent for glass matrix forming material in the FGMs to dissolve the material.

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71. (thrice amended) A [thin,] foamed glass matrix (FGM) obtained by the method of claim 1.

D10
72. (thrice amended) A composition comprising at least one biologically active agent preserved in an FGM, obtainable by the method of claim 62, wherein step (c) is conducted at [reduced] less than atmospheric pressure.

73. (thrice amended) A reconstituted biologically active agent obtained by preserving the biologically active agent within an FGM according to claim 62 wherein step (c) is conducted at [reduced] less than atmospheric pressure, and then contacting the FGM with sufficient solvent for the glass matrix forming material to dissolve the material.

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75. (thrice amended) A reconstituted single dose of a biologically active agent obtainable by producing a single dose of a biologically active agent preserved within an FGM according to claim 65 wherein step (c) is conducted at [reduced] less than atmospheric pressure,

811 and then contacting the FGM with sufficient solvent for the glass matrix forming material to dissolve the material.

D12 79. (amended) The method according to claim 1, wherein the syrup has a viscosity of [at least] 10^6 - 10^7 Pascal seconds.

E 81. (twice amended) The method according to claim 49, wherein the biologically active agent to be preserved is a physiologically active [small] molecule selected from the group consisting of Cyclosporin A and other immunosuppressive agents, beta blockers, H2 agonists, H2 antagonists, steroids, sex hormones, Phenobarbitals, analgesics, antimicrobials, antivirals, antiinflammatories, antiarthritics, antispasmodics, antidepressants, antipsychotics, tranquilizers, antianxiety drugs, narcotics, antiparkinsonism agents, cholinergic agonists, chemotherapeutics, appetite suppressants, anticholinergics, antiemetics, antihistaminics, antimigraine agents, vasodilators, contraceptives, antithrombotic agents, diuretics, antihypertensives, cardiovascular drugs, and opioids.

D14 87 (twice amended) The composition of claim 72, wherein the biologically active agent is selected from the group consisting of lipids, proteins, peptides, peptide mimetics, oligosaccharides, oligonucleotides, protein nucleic acid hybrids, and physiologically active [small] molecules.

(91) (twice amended) A method for producing [thin,] foamed glass matrices (FGMs), comprising the steps of:

D15 (a) preparing an initial mixture comprising at least one glass matrix-forming carbohydrate, a biologically active agent, a solvent therefor, and at least one foam-promoting additive which is a volatile salt or a salt that decomposes at [reduced] less than atmospheric pressure to give a gaseous product;

(b) evaporating a proportion of the solvent from the mixture to obtain a syrup;
[and]

15 (c) [exposing the syrup to reduced] boiling the syrup under less than atmospheric pressure [at a temperature that causes] to produce foaming of the syrup [at said pressure, resulting in formation of an FGM.] ; and

(d) continuing step (c) until the boiling results in the formation of a solid foam and produces a foamed glass matrix.

94 (twice amended) A method for producing [thin,] foamed glass matrices (FGMs), comprising the steps of:

116 (a) preparing an initial mixture comprising at least one glass matrix-forming carbohydrate, carbohydrate alcohol or carbohydrate derivative, a biologically active agent, an aqueous solvent therefor, and a foam-promoting additive which is a volatile organic solvent;

(b) evaporating a proportion of the aqueous and organic solvents from the mixture to obtain a syrup; [and]

(c) [exposing the syrup to reduced] boiling the syrup under less than atmospheric pressure [at a temperature that causes] to produce foaming of the syrup [at said pressure, resulting in formation of an FGM.] ; and

(d) continuing step (c) until the boiling results in the formation of a solid foam and produces a foamed glass matrix.

117 Please add the following claim

97. (New) The method according to claim 65, which further comprises the reducing of the residual moisture from the product of step (c).

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Remarks

Applicants respectfully request reconsideration and allowance of claims, as amended, in view of the remarks made herein. Pending claims 14, 73 and 75 have been canceled and new claim 97 has been added. No new matter has been introduced by the amendments.